IN THE CLAIMS

The claims are amended as follows:

1.   (currently amended)   A system for optimizing storage and retrieval of data, comprising:

a transfer manager component that acquires the data from an archive and assigns predetermined storage values to specified parameters that form the data structure of the acquired data;

a database that stores the data acquired by the transfer manager component in accordance with the predetermined storage values; and

a middle tier component that extracts the data in the database and time interpolates the data in accordance with the predetermined storage values.

2.   (original)   The system according to claim 1, wherein the transfer manager component generates a query for requesting the data from the archive.

3.   (original)   The system according to claim 1, wherein the transfer manager component examines data retrieved from the archive for duplicates with the data stored in the database.

4.   (original)   The system according to claim 3, wherein the transfer manager component discards duplicate data.

5.   (original)   The system according to claim 1, wherein the predetermined storage values comprise at least one of a time block value and a filter value.

6.   (original)   The system according to claim 1, wherein the database uses the predetermined storage values as values to index using bit map indexes.

7.   (original)   The system according to claim 1, wherein the middle tier component generates a query for requesting the data from the database.

8.   (original)   A system for optimizing storage and retrieval of change detect monitoring data, comprising:

a transfer manager component that acquires the change detect monitoring data from an archive and assigns predetermined storage values to specified parameters that form the data structure of the acquired data, wherein the predetermined storage values comprise at least one of a time block value and a time filter value;

a database that stores the change detect monitoring data acquired by the transfer manager component in accordance with the time block value and time filter value; and

a middle tier component that extracts the change detect monitoring data in the database and interpolates the data in accordance with the time block value and time filter value.

9.   (original)   The system according to claim 8, wherein the transfer manager component generates a query for requesting the change detect monitoring data from the archive.

10.   (original)   The system according to claim 8, wherein the database uses the predetermined storage values as values to index using bit map indexes.

11.   (original)   The system according to claim 8, wherein the middle tier component generates a query for requesting the change detect monitoring data from the database.

12.   (original)   system for optimizing storage and retrieval of change detect monitoring data, comprising:

a transfer manager component that acquires the change detect monitoring data from an archive and assigns predetermined storage values to specified parameters that form the data structure of the acquired data, wherein the predetermined storage values comprise at least one of a time block value and a time filter value;

a database that stores the change detect monitoring data acquired by the transfer manager component in accordance with the time block value and a time filter value, wherein the database uses the predetermined storage values as values to index using bit map indexes; and

a middle tier component that extracts the change detect monitoring data in the database and interpolates the data in accordance with the time block value and time filter value.

13.   (original)   The system according to claim 12, wherein the transfer manager component generates a query for requesting the change detect monitoring data from the archive.

14.   (original)   The system according to claim 12, wherein the middle tier component generates a query for requesting the change detect monitoring data from the database.

15.   (original)   A system for optimizing storage and retrieval of change detect monitoring data, comprising:

means for acquiring the change detect monitoring data from an archive;

means for assigning predetermined storage values to specified parameters that form the data structure of the acquired change detect monitoring data, wherein the predetermined storage values comprise at least one of a time block value and a time filter value;

means for storing the acquired change detect monitoring data in accordance with the time block value and time filter value;

means for extracting the stored change detect monitoring data; and

means for interpolating the change detect monitoring data in accordance with the time block value and time filter value.

16.   (original)   The system according to claim 15, wherein the acquiring means generates a query for requesting the change detect monitoring data from the archive.

17.   (original)   The system according to claim 15, wherein the storing means uses the predetermined storage values as values to index using bit map indexes.

18.   (original)   The system according to claim 15, wherein the extracting means generates a query for requesting the stored change detect monitoring data.

19.   (original)   A system for optimizing storage and retrieval of data, comprising:

a monitoring unit that monitors change detect data obtained by at least one sensing unit;

an archive that stores the change detect monitoring data; and

a remote storage and retrieval site comprising a transfer manager component that acquires the change detect monitoring data from the archive and assigns predetermined storage values to specified parameters that form the data structure of the acquired data, wherein the predetermined storage values comprise at least one of a time block value and a time filter value, a database that stores the change detect monitoring data acquired by the transfer manager component in accordance with the time block value and time filter value and a middle tier component that extracts the change detect monitoring data in the

database and interpolates the data in accordance with the time block value and time filter value.

20.   (original)   The system according to claim 19, further comprising a communication device that facilitates communications between the archive and the remote storage and retrieval site.

21.   (original)   The system according to claim 19, further comprising at least one client computing device running an end-user application.

22.   (original)   The system according to claim 21, further comprising a communication device that facilitates communications between the remote storage and retrieval site and the at least one client computing device.

23.   (original)   The system according to claim 19, wherein the transfer manager component generates a query for requesting the change detect monitoring data from the archive.

24.   (original)   The system according to claim 19, wherein the transfer manager component examines change detect monitoring data retrieved from the archive for duplicates with the data stored in the database.

25.   (original)   The system according to claim 24, wherein the transfer manager component discards duplicate data.

26.   (original)   The system according to claim 19, wherein the database uses the predetermined storage values as values to index using bit map indexes.

27.   (original)   The system according to claim 19, wherein the middle tier component generates a query for requesting the change detect monitoring data from the database.

28.   (currently amended)   A method for optimizing storage and retrieval of data, comprising:

acquiring the data from an archive;

assigning predetermined storage values to specified parameters that form the data structure of the acquired data;

storing the acquired data in a database in accordance with the predetermined storage values;

extracting the data in the database; and

time interpolating the data in accordance with the predetermined storage values.

29.   (original)   The method according to claim 28, wherein the acquiring comprises generating a query for requesting the data from the archive.

30.   (original)   The method according to claim 28, wherein the acquiring comprises examining data retrieved from the archive for duplicates with the data stored in the database.

31.   (original)   The method according to claim 30, further comprising discarding duplicate data.

32.   (original)   The method according to claim 28, wherein the predetermined storage values comprise at least one of a time block value and a filter value.

33.   (original)   The method according to claim 28, further comprising using the predetermined storage values as values to index using bit map indexes.

34.   (original)   The method according to claim 28, wherein the extracting comprises generating a query for requesting the data from the database.

35.   (original)   A method for optimizing storage and retrieval of change detect monitoring data, comprising:

acquiring the change detect monitoring data from an archive;

assigning predetermined storage values to specified parameters that form the data structure of the acquired data, wherein the predetermined storage values comprise at least one of a time block value and a time filter value;

storing the acquired change detect monitoring data in a database in accordance with the time block value and time filter value;

extracting the change detect monitoring data in the database; and

interpolating the change detect monitoring data in accordance with the time block value and time filter value.

36.   (original)   The method according to claim 35, wherein the acquiring comprises generating a query for requesting the change detect monitoring data from the archive.

37.   (original)   The method according to claim 35, further comprising using the predetermined storage values as values to index using bit map indexes.

38.   (original)   The method according to claim 35, wherein the extracting comprises generating a query for requesting the change detect monitoring data from the database.

39.   (original)   A method for optimizing storage and retrieval of change detect monitoring data, comprising:

acquiring the change detect monitoring data from an archive;

assigning predetermined storage values to specified parameters that form the data structure of the acquired data, wherein the predetermined storage values comprise at least one of a time block value and a time filter value;

storing the acquired change detect monitoring data in a database in accordance with the time block value and time filter value, wherein the database uses the predetermined storage values as values to index using bit map indexes;

extracting the change detect monitoring data in the database; and

interpolating the change detect monitoring data in accordance with the time block value and time filter value.

40.   (original)   A method for optimizing storage and retrieval of data, comprising:

monitoring change detect data;

storing the change detect monitoring data in an archive;

acquiring the change detect monitoring data from the archive;

assigning predetermined storage values to specified parameters that form the data structure of the acquired data, wherein the predetermined storage values comprise at least one of a time block value and a time filter value;

storing the acquired change detect monitoring data in a database in accordance with the time block value and time filter value;

extracting the change detect monitoring data in the database; and

interpolating the data in accordance with the time block value and time filter value.

41.   (original)   The method according to claim 40, wherein the acquiring comprises generating a query for requesting the change detect monitoring data from the archive.

42.   (original)   The method according to claim 40, wherein the acquiring comprises examining change detect monitoring data retrieved from the archive for duplicates with the data stored in the database.

43.   (original)   The method according to claim 42, further comprising discarding duplicate data.

44.   (original)   The method according to claim 40, further comprising using the predetermined storage values as values to index using bit map indexes.

45.   (original)   The method according to claim 40, wherein the extracting comprises generating a query for requesting the change detect monitoring data from the database.

46.   (currently amended)   A computer-readable medium storing computer instructions for instructing a computer system to optimize storage and retrieval of data, the computer instructions comprising:

acquiring the data from an archive;

assigning predetermined storage values to specified parameters that form the data structure of the acquired data;

storing the acquired data in a database in accordance with the predetermined storage values;

extracting the data in the database; and

time interpolating the data in accordance with the predetermined storage values.

47. (original) The computer-readable medium according to claim 46, wherein the acquiring instructions comprises instructions for generating a query for requesting the data from the archive.

48. (original) The computer-readable medium according to claim 46, wherein the acquiring instructions comprises instructions for examining data retrieved from the archive for duplicates with the data stored in the database.

49. (original) The computer-readable medium according to claim 48, further comprising instructions for discarding duplicate data.

50. (original) The computer-readable medium according to claim 46, wherein the predetermined storage values comprise at least one of a time block value and a filter value.

51. (original) The computer-readable medium according to claim 46, further comprising instructions for using the predetermined storage values as values to index using bit map indexes.

52. (original) The computer-readable medium according to claim 46, wherein the extracting instructions comprise instructions for generating a query for requesting the data from the database.

53. (original) A computer-readable medium storing computer instructions for instructing a computer system to optimize storage and retrieval of change detect monitoring data, the computer instructions comprising:

acquiring the change detect monitoring data from an archive;

assigning predetermined storage values to specified parameters that form the data structure of the acquired data, wherein the predetermined storage values comprise at least one of a time block value and a time filter value;

storing the acquired change detect monitoring data in a database in accordance with the time block value and time filter value;

extracting the change detect monitoring data in the database; and

interpolating the change detect monitoring data in accordance with the time block value and time filter value.

54.   (original)   A computer-readable medium storing computer instructions for instructing a computer system to optimize storage and retrieval of change detect monitoring data, the computer instructions comprising:

acquiring the change detect monitoring data from an archive;

assigning predetermined storage values to specified parameters that form the data structure of the acquired data, wherein the predetermined storage values comprise at least one of a time block value and a time filter value;

storing the acquired change detect monitoring data in a database in accordance with the time block value and time filter value, wherein the database uses the predetermined storage values as values to index using bit map indexes;

extracting the change detect monitoring data in the database; and

interpolating the change detect monitoring data in accordance with the time block value and time filter value.

55.   (original)   A computer-readable medium storing computer instructions for instructing a computer system to optimize storage and retrieval of change detect monitoring data, the computer instructions comprising:

monitoring change detect data;

storing the change detect monitoring data in an archive;

acquiring the change detect monitoring data from the archive;

assigning predetermined storage values to specified parameters that form the data structure of the acquired data, wherein the predetermined storage values comprise at least one of a time block value and a time filter value;

storing the acquired change detect monitoring data in a database in accordance with the time block value and time filter value;

extracting the change detect monitoring data in the database; and

interpolating the data in accordance with the time block value and time filter value.